Chapter 11

Program Evaluation and Outcome Measures

❖ INTRODUCTION

Evaluating the effectiveness of a program or intervention in achieving the desired outcomes is essential for successful quality improvement, program evaluation, and dissemination of research. Evaluation consists of the application of a systematic process for the purpose of determining whether or not the intervention or program achieved the intended effects or outcomes (Braden, 1998). Outcomes are the consequences or effects of an intervention, action, policy, or program under study. In order to properly measure an outcome; it needs to first be clearly defined. In addition, outcomes should be directly related to the study objectives and are typically expressed as a percentage, rate, or ratio. Only through the measurement of predetermined outcomes can the success or failure of a program be assessed. The purpose of this chapter is to present in a straightforward manner a brief description of the methodology and instruments used to evaluate the effectiveness of a program designed to reduce the incidence and severity of job-related injuries related to patient handling and movement tasks. These methods and tools are appropriate for evaluations across all clinical settings and populations.

❖ EVALUATION DESIGN

An evaluation design is simply a plan stating what will be measured, when it will be measured, and with what groups. The first step is deciding what groups to measure. The experimental group is the group that receives the program or intervention and the control group is the group that continues on with the norm or that does not receive the intervention or program (Last, 1995). An evaluation can either measure the experimental group alone or compare the experimental group with the control group. However, an evaluation where only the experimental group is measured makes the interpretation difficult and unconvincing. Without a comparison group, it is hard to tell if the program was “as good” as what was already being done. It is highly recommended that a control group be used for comparison purposes. A good overview of selection of appropriate control groups is covered in Weis (1996).

An alternative is a pre/post design, which allows you to evaluate differences before and after an intervention. To minimize threats to validity and biases of this type of design a time series design can be used. The time series approach involves data collection at a series of data

points before and after the intervention. For example, you may track injuries quarterly for one year before and one year after the intervention.

The timing of the measurements is of great importance to an evaluation. Pre-tests (given before an intervention is in place) have two purposes; to ensure the comparability of the intervention and control groups and to attest that any changes are the result of the program and not due to natural fluctuations in other conditions or variables. A pre-test is not required for an outcome that can only be measured after the program has been initiated such as measuring the adherence to a program.

All outcomes, if possible, should be measured in both the intervention and control group before a program is fully implemented. A post-test takes place after the program and all of its' components have been implemented. In order to detect change in an outcome via a post-test, enough time must have passed to allow the desired change to occur. In addition, measuring the outcomes midway through the program is an excellent way to measure the impact of the program across time. With proper timing, changes in outcome measures can be said to be due to the program itself.

❖ MEASURING OUTCOMES

Though not an exhaustive list, the following are possible outcomes for such a musculoskeletal injury prevention program evaluation: (a) intensity, duration and frequency of musculoskeletal discomfort, (b) job satisfaction, (c) adherence to program components, (d) health care utilization for occupational musculoskeletal disorders, (e) acceptance of program components, (f) competency, (g) incidence and severity of musculoskeletal injuries, and (h) cost and cost savings of a program. Evaluating all of these outcomes in one program may be difficult, therefore, choosing one or two main outcomes based on the objectives is most recommended.

Different methodologies can be used to measure outcomes. The simplest, most economical and prevalent is through the use of surveys or "paper and pencil tests" where the participants select answers from various choices. Surveys can be mailed, given over the Internet, or accomplished through an interview. Focus group methodology provides qualitative data versus the quantitative data retained from surveys. Focus groups are helpful when surveys cannot address the questions being asked. Kingry (1990) and Esposito and Powell-Cope (1997) provide an excellent overview of focus groups for nursing research.

Another methodology to use when a large amount of diverse data is being gathered is a data log. Logs provide a set of information provided by the participant regarding activities, opinions, or actions for a determined length of time (daily, weekly, or monthly). An example most often used in other research is dietary logs to record a participant's eating habits. In a musculoskeletal injury program a log can be used to track activities of a back injury resource nurse. Lastly, performance indicators measure the participants' achievement of a task or understanding of a concept in order to assess if they are completing a skill or task correctly, such as the use of a lifting device (Fitz-Gibbon, 1987).

If survey methodology is to be utilized, appropriate selection of evaluation tools is an important next step. In the best of situations, the optimum way to assess outcomes is to

select a pre-made tool with strong psychometric properties (e.g. validity and reliability) designed specifically for the needs of your program. However, finding such a tool that measures the outcome desired from your particular program or intervention may be problematic. In those cases one might develop a customized tool. Care and consideration should be put into the construction of any new tool. The tool should be constructed by a consensus of people familiar with the subject content and pilot tested with a comparable population to the population under study. Lu Ann Aday provides a comprehensive dialogue on the designing of health surveys (1996).

This chapter will cover the most salient outcomes for musculoskeletal prevention programs: (a) Incidence and severity of injuries, (b) Musculoskeletal pain/discomfort, (c) Job satisfaction, (d) Acceptance of program, (e) Adherence of program, and (f) Cost and Cost-Savings.

❖ EVALUATION TOOLS

Incidence/Severity of Injuries: The cornerstone of any musculoskeletal injury prevention program evaluation is the measurement of injury incidence and severity. Before data collection begins, a definition including appropriate inclusion and exclusion criteria should be formed that denotes a reportable injury for a specific program evaluation. All injuries should not be included in a program evaluation, only the type of injury that your program is trying reduce, such as musculoskeletal injuries related to patient handling and movement.

Data collected should ideally include a description of the incident (including equipment used and task being performed), time and date of incident, unit and where on unit incident occurred, body part affected (primary and secondary), days of work lost, modified (light or restricted) duty days, information on nurse injured (position, number of hours normally worked), staffing variance or staffing level, any personal sick or annual days taken, and medical care received as a result of the injury both within the hospital and outside of the hospital. This type of data may be located in several different databases within one facility, incompletely recorded or not recorded at all.

While there are several methods available for collecting data of this nature such as retrospective review of incident reports, OSHA logs, interviews with nurse managers and prospective independent data collection, some have merits above and beyond the others. For example, using past incident reports may not include critical information about staffing levels, whether equipment was being used, and other contributing factors. Also, minor differences may exist between and within VISN's as to how this data is recorded and stored. Below is a review of the databases that should hold such data, the limitations of each, and other possible ways to measure such an outcome.

The Automated Safety Incident Surveillance Tracking System (ASISTS) package stores data on accidents that caused injuries or illnesses that are reported in the VA via the Report of Accident form (2162), the Notice of Traumatic Injury and Claim for Continuation of Pay form (CA-1) and the Notice of Occupational Disease and Claim for Compensation form (CA-2) forms. After an incident occurs, the staff member goes to their supervisor to report the incident. The supervisor gathers information on the incident and completes a Report of Accident (2162). Every injury in a facility will have a 2162 filed, however, it is up to the person injured as to whether or not either a CA-1 or CA-2 will be filed. Therefore, examining the 2162 forms gives a better overall picture of the injuries that occurred on a unit or within a

facility. However, the CA-1 or CA-2 forms record more extensive data on the injury than does the 2162 form.

The following data points are stored in the 2162 database: personnel status (employee or volunteer), name of person involved, SSN, home address, home phone number, injury or illness, date and time of injury/incidence, type of incident (assault, needle stick, etc.), supervisor, general setting of incident, location of injury, brief description of incident, characterization of injury, body part most affected, additional body part affected, side of body, status of duty returned to (full or light), lost time, corrective action taken ASISTS, 1998.

Usually, the majority of your data needs can come solely from the 2162 form or the CA-1/CA-2 form via the ASISTS program. However, the ASISTS program does not record extensive data on medical action taken either at the facility or outside of the facility. Also, these forms are not updated as the injured person's lost time and light duty days change in relation to the injury. In conclusion, while the majority of data is available in the ASISTS program, reliable measures of lost time and restricted duty days are not.

In order to get the most accurate data on lost and restricted time, use of the OSHA 200 log is suggested. The OSHA 200 log is a federally mandated record of work-related injuries or illnesses that required medical treatment or resulted in lost time or restricted time (McGrail, 1995). Injuries that do not result in lost time or restricted time are not included in the OSHA 200 log. Verifying injury data collected using the ASISTS package with the OHSA log is an excellent way to verify lost time and restricted time. For the calculation of injury rates, many different sources of denominator data can be used; for example number of assigned full time employee equivalents (FTEE) to a unit can be collected from a Human Resource Department. In addition, various standard injury rate statistics exist to aid in summarizing injury data (Goldman, 2000). These are summarized in Attachment 11-1. [NOTE: This form is due to be replaced by OSHA on January 1, 2002, with the OSHA 300. It has different recordability requirements.]

Lastly, a comprehensive injury data collection tool can be developed to collect all of the items needed directly from the injured person. This may save time and be more efficient then using several different databases. Such a tool was developed and is included in Attachment 11-2.

Musculoskeletal Pain/Discomfort: Pain is an unpleasant sensory and emotional experience arising from actual or potential tissue damage or described in terms of such damage (International Association for the Study of Pain, 1979). Because of the complex nature of pain, its measurement is difficult. Components of pain that may be of interest are the intensity of the pain, the location of the pain, the length of time the pain was felt, and the consequences of pain, such as decreased quality of life and functioning, and lost time from work. Assessment of pain should be simple, quick, valid, and reliable as well as include as many components as desired in relation to program objectives.

Many tools exist that accurately evaluate pain/discomfort such as the Visual Analog Scale (VAS) (Carr, 1992), Wisconsin Brief Pain Inventory (BPI) (Cleeland, 1994), and the McGill Pain Questionnaire (MPQ) (Melzack, 1975). Deciding on a single pain tool can be overwhelming. Focusing on why pain is included as an outcome and what components of pain are to be included will aid in the selection. Other things to keep in mind are the goals of the project, financial constraints, time constraints and burden on the participant. Many of

the pain tools have a fee associated with them and still others require any data collected with their tool be included in the author's data bank.

Another popular musculoskeletal discomfort questionnaire is the Cornell Musculoskeletal Discomfort Questionnaire. Developed by Dr. Alan Hedge at Cornell University the questionnaire is based on previous published research studies of musculoskeletal discomfort among office workers (Hedge, 1999; Hedge, 1995). The instrument is constructed whereby the human body is pictured on the left and the participant is asked to report on several different components of the pain they are feeling. They are asked about the frequency of the pain in the respective area during the preceding week, how uncomfortable the pain was, and did the pain interfere with their ability to work. This tool appropriately evaluates a variety of pain components and is short and easy for the participant to complete. This survey can be accessed at:
http://ergo.human.cornell.edu/ahmsquest.html.

Job Satisfaction: Several studies have shown that job satisfaction can discriminate between injured and non-injured nurses and that low perceived control and lack of social support are correlated with having a musculoskeletal injury (Ready, 1993; Bongers, 1993). Examining job satisfaction in conjunction with other outcomes begins to show a full picture of the impact of the program. Immediate changes in outcomes such as injury incidence may not be apparent early in a program evaluation. A change in an outcome such as job satisfaction may be an important first step in decreasing injuries.

Job satisfaction is a complex outcome, derived from attitudes and perceptions of various elements of work such as degree of enjoyment, perceptions of the work environment, reward system, autonomy, and professional status (Shader, 2001). Job satisfaction is comprised of both intrinsic (personal achievement, sense of accomplishment) and extrinsic factors (pay and benefits, working conditions). As with the measurement of musculoskeletal pain/discomfort many tools exist that evaluate job satisfaction and choosing the correct tool for a study involves thoroughly examining the previously published tools.

An excellent tool in which to measure the satisfaction nurses specifically feel towards their job and job tasks is the Stamps and Piedmont Index of Work Satisfaction Instrument (IWS) (Stamps, 1997). This instrument assesses six components of a nurse's work satisfaction: pay, autonomy, task requirements, organizational policies, professional status, nurse/nurse interaction, and physician/nurse interaction. Participants are asked to rate their level of satisfaction of these areas identified with 44 survey items using a scale ranging from one to seven (agree to disagree). This tool has demonstrated reliability, validity and sensitivity. A copy of this survey can be found in Attachment 11-3.

Provider Acceptance: For a program to be successful, it has to reduce injuries, save money, increase job satisfaction, and be feasible. However, none of these can occur if the staff does not accept the program's components. Measuring the staff's acceptance of a program may be the most difficult outcome to measure, as an evaluator will have to use many different methodologies through the entire length of the program to get an accurate picture of this outcome. Measuring acceptance of a program should occur during the length of the program in order to assess the changes with time. The use of both survey tools and focus groups should be used here. It is also imperative to not only measure the acceptance of the program but to find out what is not working and why. An excellent way to do this is through the use of logs.

Development of such logs must be carefully overseen. Each component of the program being studied must be included. Pilot testing with a comparable population is a necessity. Monthly logs completed by the unit BIRN could evaluate the duties of being a BIRN and the associated workload (how often are they being used by staff), how effective the BIRN feels each component of the program is in preventing musculoskeletal injuries. Monthly logs completed by a different source such as a nurse administrator or site coordinator could evaluate the use and acceptance of algorithms, success of the ergonomic hazard evaluations, and timing of the after action reviews. Examples of such a log can be found in Attachment 11-4. (Provider Acceptance does not match algorithm 14-4

Patient Acceptance: In addition to measuring the provider's acceptance, the attitudes and beliefs of the patients must also be examined. While this is a measurable outcome, specific areas of patient acceptance are more meaningful than others such as dignity, comfort and security. Like provider's acceptance, patient acceptance is a difficult outcome to measure, using different methodologies through the entire length of the program. In addition, the cognitive ability of patients must be taken into consideration when choosing or developing tools and conducting focus groups. It is also imperative to not only measure the acceptance of the program but to find out what is not working and why. Any time new lifting technology is introduced or even new lifting methods such as the use of lifting teams, the dignity and comfort of the patient must be addressed.

Adherence: Measuring the participant's adherence to a program or intervention is an important outcome. If the program is showing positive outcomes and the staff are not adhering to the program components, the evaluator can not be sure what is making the positive changes-the program or a deviation of the program. Also, if multiple components make up a single program, it is likely that some pieces of the program are working better then others. If the staff is not using certain components, it is possible that those components are not reducing the injuries, that other components are having the real effect. Usually a tool will have to be developed that will measure the adherence to the components of the particular program.

A copy of the survey developed to assess participant's adherence is included in Attachment 11-5. This one-page survey inquires about the use of patient care equipment. Eleven different types of equipment were named and the participants are asked how many times in a typical day would they use such equipment. An increase in the number of times a participant used the equipment would indicate adherence to the no-lift policy as well as frequent usage of the equipment.

In addition to the use of the surveys, the monthly logs address such issues as use and acceptance of the algorithms, use and acceptance of the after action review process, and detailed examination of the activities of the BIRN nurses. In conjunction with the monthly logs and survey tool, focus groups can be performed with nursing staff and administrators.

Cost effectiveness of safe patient handling and movement technology: A study can be designed to determine whether introduction of technology such as lifts is cost-effective in reducing injuries to caregivers in handling patients. The design of the study should include a facility where the intervention will be conducted and similar facilities to be used as control sites. Care should be exercised to ensure that similarity exists at the experimental and control facilities in patient mix, staffing levels, staffing mix (Nursing Assistants, Licensed Practical Nurses, Registered Nurses) and experience among caregivers.

Over a period of time technology such as ceiling lifts and other devices to enable patient handling can be introduced with adequate training at the intervention site and the injury rate carefully monitored at both facilities. At the end of the trial the cost effectiveness ratio can be calculated to determine the efficacy of introducing technology to reduce injury rates among caregivers. Some of the costs and associated outcomes can be summarized as follows:

1. Direct costs of installing and operating lifting devices (intervention site):

    a) Capital expenditures (costs of lifts and associated installation and maintenance costs). Accounting methodology, using depreciation, should be used to provide the direct costs of purchasing and installing the lifting devices to be allocated to the period of study
    b) Costs associated with training caregivers at each of the sites. Training costs to be amortized over the period of study.
    c) Cost of consultants (wages and salaries).

2. Outcomes: Changes in injury rates and associated cost patterns (recorded as the difference in pre and post intervention costs of injury to caregivers at the intervention and control site)

    a) Changes in the cost of lost productivity due to injured caregivers in restricted activity category and absenteeism. Wages of caregivers can be used as a proxy and measure of productivity.
    b) Changes in worker's compensation paid to injured caregivers on sick leave.
    c) Changes in employee turnover rates and associated cost savings realized in training new hires.
    d) Changes in the direct costs of treating injured employees on site or external facilities.

The net outcome effect (NET) of the intervention is the total change (reduction) in costs due to the introduction of technology at the intervention site. NET should be adjusted, using statistical techniques, for exogenous factors as observed by the change in costs at the control site. The ratio of the direct costs as mentioned in (1) divided by the NET provides us with the cost per dollar of cost savings achieved through the incorporation of ceiling lifts to prevent injury, [Note: If the evaluation is to be completed over several years, the annual inflation rate of medical care and wages may need to be considered in the analysis. For example, medical procedure that cost $100 in 1997 may cost $150 in 2000,]

Intangible Benefits: Non-quantifiable intangible benefits not included in the calculations can be described as higher morale, job satisfaction and lower employee turnover.

Attachment 11-1

Standard Injury Rate Statistics

Total Injury Report Rate (TIRR): Number of injury reports/100 FTEE TIRR=(Number of reports filed/area/year) x (200,000 hours worked/100 FTEE) Number of hours worked/area/year
Compensation Case Rate (CCR): Number of workman's compensation cases/100 FTEE CCR= (Number of WC Cases/area/yr) x (200,000 hours worked/100 FTEE) Number of hours worked/area/year
Compensation Severity Rate (SR): Number of days lost/100 FTEE SR= (Number of WC lost days/area/yr) x (200,000 hours worked/100 FTEE) Number of hours worked/area/year
Cost Rate: Dollars actually spent/100 FTEE Cost Rate= ($$ Spent/area/yr) x (200,000 hours worked/100 FTEE) Number of hours worked/area/year
Composite Risk Indicator (CRI) CRI= square root of (TIRR x CCR x SR x Cost Rate)/1,000,000
Average Relative Risk (ARR) ARR= (TIRR/TIRR goal) * (CCR/CCR goal) * (SR/SR goal) * (Cost Rate/Cost Rate goal) 4
OSHA Formula= Total number of back injuries X 2000,000 person hrs Actual hours worked by unit measure

Attachment 11-2
Injury Data Collection

Please complete for EACH RECORDABLE injury. (Write in information and/or circle/highlight your selection)

Variable	Description	Response
Position	Position of the nurse	RN LPN NA Nurse Manager CNS Nurse Practitioner Student Health Care Tech
Hrs/Week	Hrs NORMALLY worked per week	
Date	Date of injury	
Time	Time of the injury in non-military time	
Unit	Unit where injury occurred	
Staffing Variance	Staffing Variance	
Location	Location of injury	Patient Room Bathroom Hall Dayroom Other location on unit Lab Procedure Room Public Area (ex: waiting room) Elevator Grounds Elsewhere in hospital (off the unit) Other

Variable	Description	Response			
Type of Injury	Medical type of injury	*Abrasions* *Contusion/Bruise* *Cumulative Trauma* *Dislocation* *Exhaustion/Overexertion* *Fracture* *General Muscle Pain* *Hernia* *Joint Pain* *Laceration/cut* *Puncture wound* *Tingling/Numbness* *Slipped Disk* *Dislocation* *Other:_____*	919.0 924.9* 924.9 831.00 780.79 829.0* 729.1 553.9 719.40 879.8 879.8 782.0 839.8*	*Sprain/Strain* *Neck* *Shoulder/Arm* *Thoracic* *Upper Back* *Mid Back* *Low Back* *Leg* *Knee* *Ankle*	847.0 840.8 847.1 847.9 847.2 847.9 844.9 845.00 847.1
Patient Care Activity	Activity being performed when injured	*Pulling Patient up to Head of Bed* *Repositioning Patient in Bed (side-to-side)* *Pulling Patient up in Chair/WC/Geri, etc* *Repositioning Patient in Chair/WC/Geri, etc.* *Transferring Patient to & from Chair to Chair/Geri chair* *Transferring Patient to & from Chair to Car* *Transferring Patient to & from Chair to Toilet* *Transferring Patient to & from Chair to Bed* *Transferring Patient to & from Bed to Stretcher/Surgi-lift* *Bathing Patient in Bed* *Bathing Patient in Bathroom* *Feeding Patient* *Dressing Patient in Bed* *Dressing Patient other than in bed* *Diapering Patient* *Making Occupied Bed* *Making Unoccupied Bed* *Applying TED hose* *Picking Patient Up from Floor* *Managing Aggressive Behavior* *Moving Patient Care Equipment – No patient* *Transporting Patient in Wheelchair* *Transporting Patient by stretcher, trolley, etc.* *Other*			

Variable	Description	Response
Primary Cause of Injury	The primary cause of the injury	*Lifted/moved patient vertically* *Pushed/Pulled Patient/Object* *Twisted while moving/lifting patient* *Twisted while moving/lifting load other than patient* *Twisted with no patient/load* *Bent/stooped while holding patient (leg, arm, body)* *Bent/stooped holding load other than patient* *Bent/stooped with no load* *Reached while holding patient (leg arm, body)* *Reached while holding load other than patient* *Reached with no load* *Patient Slipped/Tripped/Fell* *Patient made sudden Movement* *Used Lifting equipment (full body sling lift, stand assist lift, etc.)* *Used other patient care aids (wheelchair, lateral transfer aids)* *Attached/Detached sling to lifting equipment* *Positioned sling under patient* *Positioned object under patient (sheet, lateral transfer aid, etc.)* *Physical overexertion* *Struck by object* *Struck by patient* *Struck against* *Slipped/Tripped performing patient care* *Caught in/on/between/under something* *Punctured/cut by something* *Other*
Secondary cause of Injury	The secondary cause of the injury (use same list as for primary cause)	

Variable	Description	Response			
#1 Body Part	The single body part **most** affected by the injury	*Whole Body* *Head/skull/face* *Neck* *Shoulders* *Left arm (upper or lower)* *Right arm (upper or lower)* *Left wrist* *Right wrist* *Left Hand/fingers* *Right Hand/fingers* *Chest* *Abdomen* *Hips/pelvis* *Back-lower* *Back-middle* *Back-upper* *Buttocks* *Knees* *Right leg (upper or lower)* *Left leg (upper or lower)* *Right ankle* *Left Ankle* *Right Foot/toes* *Left Foot/toes*			
#2 Body Part	The #2 body part most affected – use same list as for #1 Body Part				
Restricted Days	How many TOTAL restricted days resulted from injury	*INITIAL SUBMISSION*	*FOLLOW-UP SUBMISSIONS*		
		Total # _____ *Date _____*	*Total #___* *Date ____*	*Total # ___* *Date: ____*	*Total # _____* *Date: _____*
Lost days	How many TOTAL lost days resulted from injury. (Count lost days the day AFTER the injury occurred.)	*INITIAL SUBMISSION*	*FOLLOW-UP SUBMISSIONS*		
		Total # _____ *Date _____*	*Total #* *Date*	*Total #* *Date*	*Total #* *Date:*
Full Duty Status	If on Lost Time or Restricted Duty, has injured employee returned to Full Duty Status?	*YES NO*	*YES NO*	*YES NO*	*YES NO*

Variable	Description	Response	
Sick/Annual days taken	How many TOTAL sick OR annual days were taken due to the injury	*INITIAL SUBMISSION* *Total #* _____ *Date* _____	*FOLLOW-UP SUBMISSIONS* *Total #* _____ *Total #* _____ *Total #* ____ *Date* _____ *Date* _____ *Date* _____

ATTACHMENT 11-3

INDEX OF CAREGIVERS' SATISFACTION

Nursing Satisfaction Survey

Instructions:
Listed and briefly defined on this sheet of paper are six terms or factors that are involved in how people feel about their work situation. Each factor has something to do with "work satisfaction." We are interested in determining which of these is most important to you in relation to the others. Please carefully read the definitions for each factor as given below.

1. Pay: dollar remuneration and fringe benefits received for work done
2. Autonomy: amount of job-related independence, initiative, and freeedom, either permitted or required in daily work activities
3. Task Requirements: tasks or activities that must be done as a regular part of the job
4. Organizational Policies: management policies and procedures put forward by the hospital and nursing administration of this hospital
5. Interaction: opportunities presented for both formal and informal social and professional contact during working hours
6. Professional Status: overall importance or significance felt about your job, both in your view and in the view of others

Each of the above terms are listed below. For each term, decide how significant it is for your job satisfaction or morale. Please fill in the bubble that most closely indicates how you feel with five being a highly significant factor and a 1 being not significant at all. For example, if pay is a highly significant factor in your job satisfaction, then you would mark 5.

	Not Significant				Highly Significant
1. Pay	○ 1	○ 2	○ 3	○ 4	○ 5
2. Autonomy	○ 1	○ 2	○ 3	○ 4	○ 5
3. Task Requirements	○ 1	○ 2	○ 3	○ 4	○ 5
4. Organizational	○ 1	○ 2	○ 3	○ 4	○ 5
5. Interaction	○ 1	○ 2	○ 3	○ 4	○ 5
6. Professional Status	○ 1	○ 2	○ 3	○ 4	○ 5

The following items represent statements about how satisfied you are with your current nursing job. Please respond to each item. It may be difficult to fit your responses into the seven categories; in that case, select the category that **comes closest** to your response to the statement. It is very important that you give your **honest** opinion. Please do not go back and change any of your answers.

Instructions: Please fill in the bubble that most closely indicates how you feel about each statement. The **left** set of numbers indicate degrees of **agreement**. If you strongly agree with the first statement, circle 1; if you agree with it, circle 2; if you mildly or somewhat agree, circle 3. The **right** set of numbers indicates degrees of **disagreement.** If you strongly disagree with the first statement, circle 7; if you disagree circle 6; if you mildly or somewhat disagree, circle 5. The center number (4) means "undecided". Please use it as little as possible.

Remember: The more strongly you feel about the statement, the further from the center you should circle, with agreement to the left and disagreement to the right.

	AGREE					DISAGREE	
1. My present salary is satisfactory.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
2. Nursing is not widely recognized as being an important profession.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
3. The nursing personnel on my service pitch in and help one another out when things get in a rush.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
4. There is too much clerical and "paperwork" required of nursing personnel in this hospital.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
5. The nursing staff has suffucient control over scheduling thier own shifts in this hospital.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
6. Physicians in general cooperate with nursing staff on my unit.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○
7. I feel that I am supervised more closely then is necessary.	1 ○	2 ○	3 ○	4 ○	5 ○	6 ○	7 ○

	AGREE						DISAGREE
	1	2	3	4	5	6	7
8. It is my impression that a lot of nursing personnel at this hospital are dissatisfied	○	○	○	○	○	○	○
9. Most people appreciate the importance of nursing care to hospital patients.	○	○	○	○	○	○	○
10. It is hard for new nurses to feel "at home" in my unit.	○	○	○	○	○	○	○
11. There is no doubt whatever in my mind that what I do on my job is really important.	○	○	○	○	○	○	○
12. There is a great gap between the administration of this hospital and the daily problems of the nursing service.	○	○	○	○	○	○	○
13. I feel I have sufficient input into the program of care for each of my patients.	○	○	○	○	○	○	○
14. Considering what is expected of nursing service personnel at this hospital, the pay we get is reasonable.	○	○	○	○	○	○	○
15. I think I could do a better job if I did not have so much to do all the time.	○	○	○	○	○	○	○
16. There is a good deal of teamwork and cooperation between various levels of nursing personnel on my service.	○	○	○	○	○	○	○

	AGREE						DISAGREE
	1	2	3	4	5	6	7
17. I have too much responsibility and not enough authority.	○	○	○	○	○	○	○
18. There are not enough opportunities for advancement of nursng personnel at this hospital.	○	○	○	○	○	○	○
19. There is a lot of teamwork between nurses and doctors on my own unit.	○	○	○	○	○	○	○
20. On my service, my supervisors make all of the decisions. I have little direct control over my own work.	○	○	○	○	○	○	○
21. The present rate of increase in pay for nursing service personnel at this hospital is not satisfactory.	○	○	○	○	○	○	○
22. I am satisifed with the types of activities that I do on my job.	○	○	○	○	○	○	○
23. The nursing personnel on my service are not as friendly and outgoing as I would like.	○	○	○	○	○	○	○
24. I have plenty of time and opportunity to discuss patient care problems with other nursing service personnel.	○	○	○	○	○	○	○
25. There is ample opportunity for nursing staff to participate in the administrative decision-making process.	○	○	○	○	○	○	○
26. A great deal of independence is permitted, if not required, of me.	○	○	○	○	○	○	○

	AGREE					DISAGREE	
	1	2	3	4	5	6	7
27. What I do on my job does not add up to anything really significant.	○	○	○	○	○	○	○
28. There is a lot of "rank consciousness" on my unit: nurses seldom mingle with those with less experience or different types of educational preparation.	○	○	○	○	○	○	○
29. I have sufficient time for direct patient care.	○	○	○	○	○	○	○
30. I am sometimes frustrated because all of my activities seem programmed for me.	○	○	○	○	○	○	○
31. I am sometimes required to do things on my job that are against my better professional nursing judgement.	○	○	○	○	○	○	○
32. From what I hear about nursing service personnel at other hospitals, we at this hospital are being fairly paid.	○	○	○	○	○	○	○
33. Administrative decisions at this hospital interfere too much with patient care.	○	○	○	○	○	○	○
34. It makes me proud to talk to other people about what I do on my job.	○	○	○	○	○	○	○
35. I wish the physicians here would show more respect for the skill and knowledge of the nursing staff.	○	○	○	○	○	○	○

	AGREE						DISAGREE
	1	2	3	4	5	6	7
36. I could deliver much better care if I had more time with each patient.	○	○	○	○	○	○	○
37. Physicians at this hospital generally understand and appreciate what the nursing staff does.	○	○	○	○	○	○	○
38. If I had the decision to make all over again, I would still go into nursing.	○	○	○	○	○	○	○
39. The physicians at this hospital look down too much on the nursing staff.	○	○	○	○	○	○	○
40. I have all the voice in planning policies and procedures for this hospital and my unit that I want.	○	○	○	○	○	○	○
41. My particular job really doesn't require much skill or "know-how".	○	○	○	○	○	○	○
42. The nursing administrators generally consult with the staff on daily problems and procedures.	○	○	○	○	○	○	○
43. I have the freedom in my work to make important decisions as I see fit, and can count on my supervisors to back me up.	○	○	○	○	○	○	○
44. An upgrading of pay schedules for nursing personnel is needed at this hospital.	○	○	○	○	○	○	○

1. Do you hold any professional nursing certificates?

○ No

○ Yes

2. What is your highest educational nursing degree.

○ Diploma

○ ADN

○ BSN

○ MSN

○ PhD

3. How long have you been employed in the nursing of the VA?

○ Less then one year

○ One year to three years

○ Three years to 10 years

○ 10 years to 20 years

○ More then 20 years

ATTACHMENT 11-4

PATIENT CARE EQUIPMENT USE SURVEY

[Note: You may want to add definitions of the equipment and/or use facility-specific brand names to clarify which piece of equipment you want the staff to evaluate.]

Patient Care Equipment Use Survey

(1) How many times in a typical day would you say you use the following patient care aids?

(a) Powered Full Body Sling Lifts Ceiling Mounted

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(b) Powered Full Body Sling Lifts Portable Base

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(c) Mechanical Lateral Transfer Aids

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(d) Friction Reducing Lateral Aids

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(e) Air Assisted Lateral Aids

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(f) Transfer Chairs

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(g) Dependency/Geri Chairs

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(h) Powered Standing Assist & Repositioning Lifts

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(i) Standing Assist and Repositioning Aids

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

(j) Gait Belts

○ O/None ○ 1 ○ 2 ○ 3-4 ○ 5-6 ○ 7-8 ○ 9-10 ○ Greater then 10 ○ N/A

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GLOSSARY	
After Action Review (AAR)	A method for transferring knowledge that a team has learned from doing a task in one setting to the next time that team does the same task in a different setting.
Algorithm	A standardized process or set of rules by which a provider makes decisions about a complex process, e.g., which equipment and techniques to use when performing high risk patient handling and movement tasks.
Automated Safety Incident Surveillance Tracking System (ASISTS)	Software package to track and store data on accidents that caused injuries or illnesses that are reported in the VA via the Report of Accident form (2162), the Notice of Traumatic Injury and Claim for Continuation of Pay form (CA-1) and the Notice of Occupational Disease and Claim for Compensation form (CA-2) forms.
Back Belts	Belts that are specifically engineered and crafted to provide back support when lifting.
Back Injury Resource Nurse (BIRN)	Peer-leader selected for each high-risk unit who receives special training in workplace hazard identification, safe patient handling and movement assessment criteria and algorithms. The role includes, but is not limited to, unit based training and competency assessment of peers in safe use of equipment.
Body Mass Index (BMI)	Dividing patient body weight in kg by height in meters squared (m^2)
Body Mechanics	The application of mechanical laws to the human body with specific regard to normal locomotion and includes the mechanical laws governing the structure, function, and position of the human body.
Ceiling-Mounted Patient Lift	Patient transfer device that is installed on a track system in the ceiling, directly over the patient bed or patient care area. The patient is lifted using a full-body sling.
Clinical Trials	Operational trials of products for patient handling and movement tasks
Compensation Care Rate (CCR)	CCR= (Number of Worker's Compensation Cases per area per year) x (200,000 hours worked/100 FTEE)/Number of hours worked per area per year
Compensation Severity Rate (SR)	SR=(Number of Worker's Compensation lost days per area per year) x (200,000 hours worked/100 FTEE)/Number of hours worked per area per year
Composite Risk Indicator (CRI)	CRI=square root of (TIRR x CCR x SR x Cost Rate)/1,000,000
Compressive Force	Mechanical force directed along the Y (vertical) axis, brought about by the combined effect of internal and external load bearing.
Cost Benefit Analysis	A methodology frequently employed by decision makers to determine optimal allocation of resources among competing projects.
Cost Effective Analysis	A methodology frequently employed by decision makers to determine optimal allocation of resources among competing projects.
Direct Cost	In relation to cost analysis generally refers to the changes in resource use attributable to the intervention for the period of intervention
Dissemination	To spread abroad; transfer knowledge to others; promulgate: *disseminate information.*
Engineering Controls	Physical changes to the equipment, workstation or environment
Ergonomics	Design for human use / Matching job tasks to workers' capabilities
Ergonomist	A practitioner in the field of ergonomics
Evaluation Design	A plan stating what will be measured, when it will be measured, and with what groups
Friction Reducing Devices (FRD)	Low friction material assistive aids use for lateral transfer of patients.

Devices (FRD)	
Gait Belts	Installed on patients or residents, usually around the area of the waist providing handles for a worker to grasp when assisting or transferring a partially dependent patient or resident. Also known as Transfer Belts.
Geriatric	Relating to the aged or to characteristics of the aging process.
Incidence Rate	Number of new cases of a given population divided by the whole population at risk.
Lateral transfer	Movement of a patient on a horizontal plane, such as transferring a patient from a bed to a stretcher.
Lifting Team	Two or more persons, competent in lifting techniques, working together to accomplish high-risk patient transfers using assistive devices
Mechanical Lift	Free-standing patient transfer device that uses a sling and mechanical lift to move patients from a bed or seated position.
Musculoskeletal	Relating to or involving the muscles and the skeleton.
OSHA Back Injury Incidence Rate	(Total number of new back injuries/year x 200,000 work hours)/ Number of hours worked at facility in the year
Postural Hypotension	A decrease of more than 20 mm Hg systolic BP and an increase of more than 20 beats in the pulse
Prospective Data Collection	Starting from current day, into the future.
Psychometrics	The branch of psychology that deals with the design, administration, and interpretation of quantitative tests for the measurement of psychological variables such as intelligence, aptitude, and personality traits.
Restricted Work Days	Days where employees had weight-restricted limitations on their patient care assignments secondary to a work-related injury.
Risk Assessment	The qualitative or quantitative estimation of the likelihood of adverse effects that may result from exposure to specified health hazards or from the absence of beneficial influences.
Shearless Pivot	Reduces the need to constantly reposition a patient in the bed by minimizing the amount of slippage down to the foot of the bed experienced by the patient when raising the head of the bed
Spinal compression	Forces acting along the length of the spine.
Spine Loading	Overall mechanical force acting on the spine. Calculated as root-mean-square value of compressive, lateral and anterior-posterior components
Stand Assist Lift	Free-standing powered lifting device used to raise patient from prone to standing position.
Total Injury Report Rate (TIRR)	TIRR=(Number of reports filed per area per year) x (200,000 hours worked/100 FTEE)/ Number of hours worked per area per year
Transfer belt	See Gait Belt
Trendelenburg position	Body position whereby the head of the bed is lower than the foot of the bed

ACRONYMS	
AAR	After Action Review
ARR	Average Relative Risk
ADC	Average Daily Census
ADL	Activities of Daily Living
ASISTS	Automated Safety Incident Surveillance Tracking System
BIRN	Back Injury Resource Nurse (peer safety leader)
BMI	Body Mass Index
BPI	Wisconsin Brief Pain Inventory
CBA	Cost Benefit Analysis
CBT	Computer-Based Training
CCR	Compensation Care Rate
CEA	Cost Effective Analysis
CRI	Composite Risk Indicator
CSR	Compensation Severity Rate
FDA	Food and Drug Administration
FRD	Friction Reducing Devices
FTEE	Full Time Equivalent Employee
HCFA	Healthcare Finance Association
ICU	Intensive Care Unit
IRB	Institutional Review Board
LPN	Licensed Practical Nurse
MPQ	McGill Pain Questionnaire
NIOSH	National Institute for Occupational Safety and Health
NM	Nurse Manager
OSHA	Occupational Safety and Health Administration
OWCP	Office of Workers Compensation Programs
RFI	Request for Information
RN	Registered Nurse
SCI	Spinal Cord Injury
TAG	Technical Advisory Group
TIRR	Total Injury Report Rate
VA	Veterans Administration

VAMC	Veterans Administration Medical Center
VAS	Visual Analog Scale
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network